DRAFT

OUTLINE

Remote Sensing Applications for Environmental Analysis in Transportation Planning: Application to the Washington State I-405 Corridor

January 31, 2003

1. Introduction

    - Purpose of overall project and program, purpose of this study, summary of sections to follow
    - Washington State I-406 Corridor study

2. Environmental Analysis, Transportation Planning, and Remote Sensing Applications

    - National Environmental Policy Act (NEPA) implications for environmental analysis and transportation planning
    - Environmental streamlining
    - General thrust of NCRST-E and examples of relevant projects

3. Data Collection

    - Data requirements and data sources (imagery and GIS data)
    - Data collection and data description (data sources, contents, and format description)
    - Preprocessing and preparation (data input, transformation, and re-projection)

4. Image Processing and LULC Classification

    - Approaches (general strategies, data sources, procedures, and justifications)
    - Field study (site selection, site visits, supplementary LULC assessments)
    - Automated classification (sampling, training, and classification implementation)
    - Manual classification implementation (orthophoto data interpretation)
    - Analysis and comparison of results (verification, comparison, discussion, and conclusions)

5. Data Analysis and Presentation

    - Purposes and approaches
    - Data preparation for environmental assessment disciplines (data layers for each of the disciplines)
    - Data integration and statistical data generation for watersheds

6. Cost-Benefit Analysis and Applicability Assessment

- Overview on use of cost-benefit analysis to assess applicability and value of RS/GIS products
- Compiling information on costs
- Developing information on benefits
- Analysis and results
- Discussion and conclusions on usefulness of remote sensing products for environmental analysis and transportation planning (what RS could be used for, and what it isn't particularly useful for).